V. #3

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re patent application of:)	Group Art Unit: To Be Assigned
BECKER et al.)	Examiner: To Be Assigned
Continuation application of:)	Atty. Docket No. GP068-03.CN1
Application Serial No. 08/893,300)	
Filed: March 10, 2000) .	
For: KITS FOR AMPLIFYING TARGET)	
NUCLEIC ACIDS USING MODIFIED)	
PRIMERS)	

INFORMATION DISCLOSURE STATEMENT UNDER 37 CFR § 1.97(b)

Box Patent Application Assistant Commissioner for Patents Washington, D.C. 20231

Sir:

Applicant brings to the Examiner's attention the references listed on the attached form PTO-1449 (two copies), all of which were previously cited during the prosecution of parent application Serial No. 08/893,300. Accordingly, copies of these references are not enclosed.

This Information Disclosure Statement is being submitted under 37 CFR § 1.97(b) before the later of three months from the filing date of the instant application or the mailing date of a first Office action on the merits.

Applicant respectfully requests that the Examiner indicate consideration of the cited references by returning a copy of the attached form PTO-1449 with the Examiner's initials or other appropriate marks.



Continuation application of: Application Serial No. 08/893,300 Atty. Docket No. GP068-03.CN1

No fee is believed due in connection with this Information Disclosure Statement. If Applicant is mistaken, please charge the amount due to Deposit Account No. 07-0835.

I hereby certify that this correspondence (along with any referred to as being attached or enclosed) is being deposited on the date indicated below with the U.S. Postal Service as Express Mail No. EE090187350US addressed to Box Patent Application, Assistant Commissioner for Patents, Washington, D.C. 20231.

Respectfully Submitted,

GEN-PROBE INCORPORATED

Date:

March 10, 2000

By:

Charles B. Cappellari Registration No. 40,937

Patent Department 10210 Genetic Center Drive San Diego, California 92121

PH: (858) 410-8927 FAX: (858) 410-8928

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FORM PTO-1449 U.S. DEPARTMENT OF COMMERCE	ATTY. DOCKET NO.	SERIAL NO.			
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ATTY. DOCKET NO.	SERIAL NO.		
GP068-03.CN1	Continuation of 08/893,300		
APPLICANT			
Becker et al.			
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U.S. PATENT DOCUMENTS													
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EXAMINER INITIAL	OTHER DOCUMENTS (INCLUDING AUTHOR, TITLE, DATE, PERTINENT PAGES, ETC.)	
	Bobst et al., "Effect of the Methylation of the 2'-Hydroxyl Groups in Polyadenylic Acid on its Structure in Weakly Acidic and Neutral Solutions and on its Capability to Form Ordered Complexes with Polyuridylic Acid", J. Mol. Biol., 46:221-234 (1969)	;
	Burd et al., "Conserved Structures and Diversity of Functions of RNA-Binding Proteins", Science, 265:615-621 (1994)	
	Chiang et al., "Antisense Oligonucleotides Inhibit Intercellular Adhesion Molecule 1 Expression Two Distinct Mechanisms", J. Biol. Chem., 266(27):18162-18171 (1991)	by
	Corey, "48000-fold Acceleration of Hybridization by Chemically Modified Oligonucleotides", J. An Chem. Soc., 117(36):9373-9374 (1995)	1.

EXAMINER	DATE CONSIDERED			
*EXAMINER: INITIAL IF CITATION CONSIDERED, WHETHER OR NOT CONTINUE OF INCLUDE CONTINUES OF THE CONTINUES OF	TTATION IS IN CONFORMANCE WITH MPEP 609; DRAW LINE THROUGH BY OF THIS FORM WITH NEXT COMMUNICATION TO APPLICANT.			



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PATENT AND TRADEMARK OFFICE	GP068-03.CN1	Continuation of 08/893,300		
	APPLICANT			
INFORMATION DISCLOSURE STATEMENT	Becker et al.			
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INITIAL	OTHER DOCUMENTS (INCLUDING AUTHOR, TITLE, DATE, PERTINENT PAGES, ETC.)
	Cummins et al., "Characterization of Fully 2'-modified Oligoribonucleotide Hetero- and Homoduplex Hybridization and Nuclease Sensitivity", Nucleic Acids Research, 23(11):2019-2024 (1995)
	Dean et al., "Inhibition of Protein Kinase C- α Expression in Human A549 Cells by Antisense Oligonucleotides Inhibits Induction of Intercellular Adhesion Molecule 1 (ICAM-1) mRNA by Phorbol Esters", J. Biol. Chem., 269(23):16416-16426 (1991)
	Ecker et al., "Pseudo-Half-Knot Formation with RNA", Science, 257:958-961 (1992)
	Goodchild, "Conjugates of Oligonucleotides and Modified Oligonucleotides: A Review of Their Synthesis and Properties", Bioconjugate Chemistry, 1(3):165-187 (1990)
	Hou et al., "Inhibition of tRNA Aminoacylation by 2'-O-Methyl Oligonucleotides", Biochemistry, 35(48):15340-15348 (1996)
	Inoue et al., "Sequence-dependent hydrolysis of RNA using modified oligonucleotide splints and RNase H", FEBS Letter", 215(2):327-330, 1987
	Inoue et al., "Synthesis and hybridization studies on two complementary nona(2'-0-methyl)ribonucleotides", Nucleic Acids Research, $\underline{15}$ (15):6131-6148 (1987)
	Iribarren et al., "2'-0-Alkyl oligoribonucleotides as antisense probes", Proc. Natl. Acad. Sci, USA, 87:7747-7751 (1990)
	Knorre et al., "Oligonucleotides Linked to Reactive Groups", Oligodeoxynucleotides, Chpt. 8, pgs. 173-195
	Lammond et al., "Antisense oligonucleotides made of 2'-O-alkylRNA: their properties and applications in RNA biochemistry", FEBS Letter, $325(1,2):123-126$ (1993)
	Leslie et al., "Structure of the Single-stranded Polyribonucleotide Poly(2'-O-methylcytidylic Acid)", J. Mol. Biol., 119:399-414 (1978)
	Lesnik et al., "Oligodeoxynucleotides Containing 2'-O-Modified Adenosine: Synthesis and Effects on Stability of DNA:RNA Duplexes", Biochemistry, 32(30):7832-7838 (1993)
	Markiewicz et al., "The modified nucleosides of tRNAs. II. Synthesis of 2'-O-methylcytidylyl (3'-5') cytidine", Nucleic Acids Research, 2(6):951-960 (1975)
	Meinkoth et al., "Hybridization of Nucleic Acids Immobilized on Solid Supports", Analytical Biochemistry, 138:267-284 (1984)
	Miller et al., "Effects of a Trinucleotide Ethyl Phosphotriester, Gmp(Et)Gmp(Et)U, on Mammalian Cells in Culture", Biochemistry, 16(9):1988-1996 (1977)
	Monia et al, "Evaluation of 2'-Modified Oligonucleotides Containing 2'-Deoxy Gaps as Antisense Inhibitors of Gene Expression", J. Biol. Chem., 268(19):14514-14522 (1993)
	Ohtsuka et al., "Studies on Transfer Ribonucleic Acids and Related Compounds. XLI." Synthesis of tRNA Fragments containing Modified Nucleosides", Chem. Pharm. Bull., 31(2):513-520 (1983)
	Pilet et al., "Structural Parameters of Single and Double Stranded Helical Polyribonucleotides", Biochem. Biophys. Res. Comm., 52(2):517-523 (1973)
	Sproat et al., "Highly efficient chemical synthesis of 2'-O-methyloligoribonucleotides and tetrabiotinylated derivatives; novel probes that are resistant to degradation by RNA or DNA specific nucleases", Nucleic Acids Research, 17(9):3373-3386 (1989)
	Suzuki, "SPKK, a new nucleic acid-binding unit of protein found in histone", EMBOJ, 8:797-804 (1989)

SHEET 4 OF 6

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FFICE GP068-03.CN1	Continuation of 08/893,300				
APPLICANT					
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	GP068-03.CN1 APPLICANT Becker et al. FILING DATE				

EXAMINER INITIAL	OTHER DOCUMENTS (INCLUDING AUTHOR, TITLE, DATE, PERTINENT PAGES, ETC.)
	Thibaudeau et al., "How Does the Electronegativity of the Substituent Dictate the Strength of the Gauche Effect?", J. Am. Chem. Soc., 116(9):4038-4043 (1994)
	Wei et al., "Hybridization properties of oligodeoxynucleotide pairs bridged by polyarginine peptides", Nucleic Acids Res., 24(4):655-661 (1996)
	Yamaguchi et al., "Chemical synthesis of the 5'-terminal part bearing cap structure of messenger RNA of cytoplasmic polyhedrosis virus (CPV): m'G5'pppAmpG and m'G5'pppAmpGpU", Nucleic Acids Res., 12(6):2939-2954 (1984)
	"Role of the Ribose 2'-Hydroxyl Groups for the Stabilization of the Ordered Structures of Ribonucleic Acid", J. Am. Chem. Soc., 91(16): 4603-4604 (1969)

EXAMINER	DATE CONSIDERED	•
*EXAMINER: INITIAL IF CITATION CONSIDERED, WHETHER OR NOT CI- CITATION IF NOT IN CONFORMANCE AND NOT CONSIDERED, INCLUDE COP	TATION IS IN CONFORMANCE WITH MPEP 609; DRAW LINE THROUGH Y OF THIS FORM WITH NEXT COMMUNICATION TO APPLICANT	_

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		Con	ırad e	et al	l., '	"Enz	zyn	natio	2 synthe	esis c	of 2'-modified nucleic acids: identification	ation of impo	ortant phosp	phate,"	
	H	Nuc	:l. Ac	cid.	Re	s., 2	:3(1	11):1	1845-18	853 ((1995).			_	
		Cot	ten e	t al.	., "2	2'-O·	-m(ethy	1, 2'-O- (ethyl	d oligoribonucleotides and phosphoro	thioate oligo	deoxyribon	ucleotides	.,
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		Dor	ninsl	ki et	t al.	., "Ic	den	tific	cation ar	nd C	Characterization by Antisense Oligonu	icleotides of	Exon and I	ntron"	
								- "	445-745						
											ligonucleotide combinatorial libraries	for drug disc	covery,"		
									353-185						
											est of mRNA translation by antisense	2'-O-alkyloli	goribonucl	eotides,"	-
		Nucl. Acid. Res., 22(22):4591-4598 (1994).													

EXAMINER	DATE CONSIDERED	

*EXAMINER: INITIAL IF CITATION CONSIDERED, WHETHER OR NOT CITATION IS IN CONFORMANCE WITH MPEP 609; DRAW LINE THROUGH CITATION IF NOT IN CONFORMANCE AND NOT CONSIDERED, INCLUDE COPY OF THIS FORM WITH NEXT COMMUNICATION TO APPLICANT.

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(USE SEVERAL SHEETS IF NECESSARY)	March 10, 2000	To Be Assigned

EXAMINER INITIAL	OTHER DOCUMENTS (INCLUDING AUTHOR, TITLE, DATE, PERTINENT PAGES, ETC.)								
	Kawasaki et al., "Synthesis and Biophysical Studies of 2'-dRIBO-2'-F Modified Oligonucleotides,"								
	Presentation/SeminarISIS Pharmaceuticals (Jan. 1991).								
	Kean et al., "Interactions of oligonucleotide analogs containing methylphosphonate internucleotide linkages,"								
	Nucl. Acid. Res., 22(21):4497-4503 (1994).								
	Keller et al., "Synthesis and hybridization properties of oligonucleotides containing 2'-O-modified ribonucleotides,"								
	Nucl. Acid. Res., 21(19):4499-4505 (1993).								
	Larrouy et al., "RNase H is responsible for the non-specific inhibition of in vitro translation by 2'-O-alkyl,"								
	Nucl. Acid. Res., 23(17):3434-3440 (1995).								
	Shibahara et al., "Site-directed cleavage of RNA,"								
	Nucl. Acid. Res., 15(11):4403-4415 (1987).								
	Wang et al., "Relative stabilities of triple helices composed of combinations of DNA, RNA and 2'-O-methyl-RNA,"								
	Nucl. Acid. Res., 23(7):1157-1164 (1995).								
	Adams et al., "The Biochemistry of the Nucleic Acids,"								
	§7.2.1, 259-260 (11th ed. 1992).								
	Sproat et al., "2'-O-Methyloligoribonucleotides:synthesis and applications,"								
	from Eckstein, "Oligonucleotides and Analogues: A Practical Approach," Chapter 3, pgs. 49-86, (1991).								
	Uhlmann et al., Chemical Review,								
	90(4):558 (1990).								
	Winnacker, E.L., "From Genes To Clones,"								
	VCH Verlagsgesellschaft, Weinheim, FRG, 33-34 (1987).								

*EXAMINER: INITIAL IF CITATION CONSIDERED, WHETHER OR NOT CITATION IS IN CONFORMANCE WITH MPEP 609; DRAW LINE THROUGH CITATION IF NOT IN CONFORMANCE AND NOT CONSIDERED, INCLUDE COPY OF THIS FORM WITH NEXT COMMUNICATION TO APPLICANT.